U.S. Fish & Wildlife Service
Sacramento Fish & Wildlife Office
Species Account
PENNELL'S BIRD'S-BEAK
Cordylanthus tenuis ssp. capillaris

CLASSIFICATION: Endangered
Federal Register Notice 60:6671; February 3, 1995
http://ecos.fws.gov/docs/federal_register/fr2779.pdf (125 KB)

This species was listed as rare by the California Department of Fish and Game in November 1978. The California Native Plant Society has placed it on List 1B (rare or endangered throughout its range).

CRITICAL HABITAT: Not designated

RECOVERY PLAN: Final
Recovery Plan for Serpentine Soil Species of the San Francisco Bay Area; September 30, 1998.
http://ecos.fws.gov/docs/recovery_plan/980930c_v2.pdf (22 MB)

5-YEAR REVIEW: Started March 25, 2009
http://www.fws.gov/policy/library/E8-4258.html


Pennell's Bird's-Beak
© 2009 Aaron Arthur

DESCRIPTION


Pennell's Bird's-Beak
© 2009 Aaron Arthur

Pennell's bird's-beak (*C. tenuis* ssp. *capillaris*) is a branching, herbaceous annual in the snapdragon family (Scrophulariaceae). The plant grows 30 to 60 cm (12 to 24 inches) tall, with yellow-green hairless leaves and stems that become purplish with age. Leaves on the primary stem are three-parted. Otherwise, the leaves are threadlike with unlobed smooth edges.

The species is partially parasitic. It has photosynthetic leaves but forms root attachments to shrubs and possibly cypress trees.

The plants flower from June to July. The floral bracts are three-parted up to two-thirds of their length, with fine marginal hairs on bracts and calyx. The tubular corolla is about 1.5 centimeters (0.6 inch) long and garnet-brown on its sides, paler underneath. Each capsule contains 10-16 seeds.


Pennell's Bird's-Beak
© 2009 Aaron Arthur

The three-lobed outer bracts of Pennell's bird's-beak distinguish it from its nearest relative--serpentine bird's-beak (*C. tenuis* ssp.

brunneus) and from hairy bird's-beak (*C. pilosus*), another *Cordylanthus* found in the area. The latter species is densely hairy throughout, as its name implies.

See Hickman (1993) in General Information about California Plants, below, for a detailed description of these and similar species

SERPENTINE SOIL PLANTS:

Serpentine soils are formed from weathered volcanic (ultramafic) rocks such as serpentinite, dunite, and peridotite. These soils provide a harsh environment for plant growth. Several factors contribute to the inhospitability of serpentine soils to plant growth

1) Low calcium-magnesium ratio;
2) Lack of essential nutrients such as nitrogen, potassium, and phosphorous; and
3) High concentrations of heavy metals (mineral toxicity).

However, serpentine plant species have adapted to serpentine soils and require them to survive.

See the recovery plan (above) for more information about serpentine soil species.

Contact the Coastal Branch of our office (formerly the Coast-Bay-Delta Branch) at 916-414-6625 for consultations concerning serpentine soil species.

The Bay Checkerspot Butterfly PDF | RTF is an insect that depends on serpentine soil plants, primarily dwarf plantain (*Plantago erecta*).

DISTRIBUTION

Pennell's Bird's-Beak © 2009 Aaron Arthur

This species is only known from Sonoma County on serpentine barrens. It is particularly associated with Sargent cypress and Baker's manzanita.

U.S.G.S. 7 ½ Minute Quads: Camp Meeker (502B) 3812248, Geyserville (518B) 3812268, Guerneville (518C) 3812258, Healdsburg (518D) 3812257.

THREATS

Pennell's bird's-beak is threatened by potential residential development, timber harvest activities, garbage dumping, slope erosion, off-road vehicle use and roadside maintenance.

REFERENCES FOR ADDITIONAL INFORMATION

General references about California plants
www.fws.gov/sacramento/es/plant_spp_accts/plant_references.htm

Bacigalupi, R. 1966. A correction for the type locality of *Cordylanthus capillaris* Penn. Leafl. W. Bot. 10:287-288.

Chuang, T.I. and L.R. Heckard. 1975. Re-evaluation of bract morphology in taxonomy of *Cordylanthus* (Scrophulariaceae). Madroño 23(4):169-173.

_____. 1986. Systematics and evolution of *Cordylanthus* (Scrophulariaceae-Pedicularieae). Systematic Botany Monographs Vol. 10.

Kruckeberg, A.R. 1984a. California serpentines: Flora, vegetation, geology, soils, and management problems. University of California Press, Berkeley, California. 180 pp.

Pennell, F.W. 1950. *Cordylanthus capillaris*, a new bird's-beak (Scrophulariaceae) from California. Notulae Naturae 223:1-2.

_____. 1984b. The flora on California's serpentine. Fremontia 11(5): 3-10.

Photo Credit: Aaron Arthur. The photos are from Stoetz Lane near Occidental, next to the Harrison Grade Ecological Preserve. For larger images and permission information see CalPhotos http://calphotos.berkeley.edu/.

Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825
Phone (916) 414-6600
FAX (916) 414-6713

Last updated September 21, 2009